

Title: Dots and Boxes implementation

Author: Martin Balko

Department: Department of Applied Mathematics

Supervisor: RNDr. Ondřej Pangrác, Ph.D.

Supervisor's email address: pangrac@kam.mff.cuni.cz

Abstract: The presented thesis deals with the analysis of a popular logical game Dots and Boxes and its generalized versions. It focuses on the different methods and algorithms of opponent's artificial intelligence. The result of the work is implementation of the generalized version of this game in which a board editing, game with more than two players on the several levels of difficultness and the different face valuations are possible.

Keywords: Dots and Boxes, Nimstring, Advanced Chain Counting